LEADING ARTICLE

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Healthcare Resource Consumption in Terminal Care

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Summary

Recent developments in healthcare have raised important ethical challenges. One of the trends is the increasing attention to patient autonomy for medical decision making. Patients are exercising greater authority to refuse medical treatment and to seek medical treatment that may end life. Another important trend is that end of life medical care has become increasingly expensive. Further, changes in reimbursement for medical care may create incentives for providers to deny heroic treatment.

This article reviews issues relevant to these developments. We consider the issue of medical futility, the role of advance directives, and the international movement toward the legalisation of euthanasia. We suggest that futile medical treatment should not be offered and that advance directives should be used. However, review of the literature suggests that advance directives may not reduce medical costs. The effect of managed care upon advance directives, denial of heroic care and euthanasia is not known at this time.

This article provides a review of several ethical issues relevant to end of life treatment. These ethical issues have emerged because of 2 important trends in healthcare. The first trend is that medical care costs have steadily increased in most Western countries. As a result, there has been increasing pressure to allocate resources and to reduce the use of unnecessary or ineffective services.

The second trend is that there has been increasing interest in patient autonomy. Perhaps more so than at any other time in history, patients are asserting the desire to control medical decision making. This has resulted in a variety of movements, including the increased use of advance directives and increasing interest in euthanasia. The purpose of this article is to review these issues. Specifically, we consider the concept of medical futility, the economic impact of advance directives, and the international trend toward euthanasia.

The last phases of life are expensive. A variety of authors from the US and other countries have documented the enormous expenses associated with the final months of life.[1-5] In a programme such as Medicare, a small proportion of patients account for a large proportion of expenditures. For example, among the 5% of Medicare beneficiaries with the highest expenditures, those who have since died make up nearly 40%. Between 43 and 50% of the top 1% of the most expensive beneficiaries die within 1 year of generating these high costs.[5]

It is widely believed that these high costs of dying are a recent trend. In fact, most evidence suggests that the proportion of all expenditures devoted to the final phases of life have been relatively constant over the last 20 years. For example, Lubitz and Riley[5] examined the proportion of Medicare payments as a function of nearness to death. This was considered separately for data obtained

in 1976 and 1988. Although Medicare payments increased considerably between 1976 and 1988, the percentage devoted to terminal care was about the same. In other words, terminal healthcare expenses rose at about the same rate as all healthcare expenses.[3]

1. Why Is Terminal Care Expensive?

There are a variety of reasons why terminal care is expensive. Perhaps the most important is that critical illness stimulates heroic efforts at rescue.[6] High technology interventions that were introduced for limited rescue indications are now used in much broader circumstances.

Intensive care units (ICUs) were developed in the late 1960s to provide a temporary high-technology environment to enable teams of medical providers to rescue patients with acute, serious, life-threatening disease. Patients were expected either to survive and be transferred out of the unit, or die. Today, patients often spend many months in the ICU with chronic incurable conditions before they die.

Similarly, cardiopulmonary resuscitation (CPR) was developed at about the same time to restore the heartbeat of those suffering from acute life-threatening cardiac arrest. The indications for the procedure were limited to patients whose setback was temporary and who would be expected to survive and resume their normal life outside the hospital.[7] Today, CPR is attempted on so many more seriously ill patients that only a small percentage survive to hospital discharge, much less for any long period of time outside the hospital.[8]

Much of the explanation is that the basic pathology largely determines outcomes. For some patients, survival is highly unlikely, even with the best and most aggressive intervention. As a result, resources are used with little potential for benefit.[9]

2. Changing Reimbursement Systems

Contemporary medicine in the US is undergoing a paradigm shift. Under the old paradigm, providers were reimbursed on the basis of their usual and customary fees. Under indemnity insurance, there were substantial incentives to offer high volume care. When faced with uncertainty, physicians ordered tests and performed procedures.[10] The system developed excess capacity and costs escalated.[11]

Partially in response to uncontrollable costs, a new paradigm developed. The new movement started in about 1983 when the Medicare system introduced a prospective payment programme. This approach paid hospitals a flat fee based on patient diagnosis. The prospective payment system created a different set of incentives. The old system provided an incentive to keep patients in the hospital longer. The new system reversed the incentive, and hospitals began discharging patients earlier. In the first decade of the prospective payment system, the average length of stay was halved and admissions were reduced by 20%.[12]

Throughout the 1980s and early 1990s there was a substantial increase in the number of patients enrolled in US managed care organisations. Enrolment in health maintenance organisations increased from 9 million in 1980 to about 34 million in 1990. The rate of increase has continued, and current estimates place the number of individuals enrolled with managed care organisations at about 50 million. Projections for the year 2000 suggest that there will be about 100 million people enrolled in managed healthcare. Part of this growth will come from patients in Medicare and Medicaid enrolling in managed healthcare plans.

The latest development in reimbursement is the move toward capitated payment. Under capitation systems, providers enter into contractual agreements with insurance companies to provide care for a fixed annual fee. If the patient uses fewer services than expected, the provider may make a profit. Conversely, if the patient uses more services than expected, the plan will lose money. Under capitated agreements, the risk is shifted from the insurance company to the providers.

Early evidence shows that providers have become very conservative under the capitation systems. Lengths of hospital stay, which had already been declining since 1972 and were reduced sharply

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under the prospective payment system, continued to decline. For example, average length of hospital stay declined from about 5 days in 1985 to 3.75 days in 1993.[12]

3. Medical Futility

The move toward managed and capitated healthcare raises important concerns about patients with terminal or serious illnesses. Under the old paradigm, physicians and hospitals were rewarded for aggressively treating end-of-life illnesses. Under the new system, there are incentives to provide less care.

Many physicians were trained that if a test or procedure may help one patient it should be done for all patients. Consideration of costs was considered inappropriate and even immoral. However, many medical procedures were offered with little expectation of benefit. In other words, resources were used in cases where medical treatment was judged to be futile.[13] However, there was little agreement about the threshold for futility.

How might futility be defined? Schneiderman et al.[14] point out that medical futility has both a quantitative and a qualitative aspect. Following the common-sense notion that one can never be absolutely certain that a treatment will succeed or fail, they argue that a treatment should be considered futile if empirically it has not achieved an outcome over a certain qualitative threshold after being attempted in 100 cases. This serves as the quantitative threshold. In defining the qualitative threshold they propose that any treatment that merely preserves permanent unconsciousness or that fails to end total dependence on intensive medical care should be regarded as nonbeneficial and, therefore, futile.

In defining the qualitative threshold, they distinguish between an effect and a benefit. Medicine can achieve an inordinate number of effects, such as raising and lowering blood pressure, restoring heartbeat, replacing kidney function, assisting ventilation, and so forth, but none of these effects are a benefit if the patient lacks the capacity to appreciate it. Thus, a qualitative threshold is whether the patient can experience and make use of the state of health to fulfil other life goals, namely that the patient is conscious and able to survive outside the ICU.[14] In addition to defining what is futile, the definition encourages providers to review their past experience and to keep better records of their outcomes so that they know not only what treatments to attempt but, equally important, know what treatments to avoid.

Until recently, physicians have tended to see their professional duties as requiring them to employ whatever technologies are available to prolong life even if the chances for success are negligible. Fortunately, it appears that this attitude is changing. Ironically, such therapeutic aggressiveness violates the fundamental, classical duty of physicians recorded in the Hippocratic Corpus: 'Whenever the illness is too strong for the available remedies, the physician surely must not even expect that it could be overcome by medicine'. The Hippocratic writings further cautioned that a physician should not attempt 'what does not belong to nature,' adding that the ignorance of medical limits was 'allied to madness'.[15] On the other hand, it might be argued that a physician who offers a treatment that is almost certain to fail is misleading the patient and violating their own personal or ethical convictions. Physicians also have an ethical responsibility to follow their own commitments. In the case of a dying patient, the physician's primary responsibility might be to relieve pain and to care for the patient in an empathetic and caring way. The application of futile treatments may distract physicians from this goal.[16]

One of the major concerns is that physicians will declare valuable treatments as futile as a way of rationing care. In order to understand these arguments, it is important to make the distinction between futility and rationing. Futility describes the use of treatments which have no potential to benefit a patient. When futile treatments are not offered, the patient is no worse off. Rationing involves withholding treatments from one group of people so that they can be offered to others with

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greater entitlement. It is presumed that those services withheld have potential for benefit.[16]

4. Prediction of Survival

Medical care is just one of many determinants of survival for patients with terminal illness. In fact, for patients with serious illness, use of resources may be unrelated to the chances that a patient will survive. The Study to Understand Prognosis and Preferences for Outcomes and Risks of Treatments (SUPPORT) was a multicentre clinical trial designed to learn about the decision processes of seriously ill patients.[17] The study had several important features. First, the study attempted to develop accurate predictions of the risk of death. These predictions were used to help physicians in medical decision making. Models that accurately predict death might assist in the decision process by reducing uncertainty, so that there can be clearer communication between physicians, patients and families. There were 2 phases to the study. In the first phase, the investigators attempted to describe the decision process and to build models that would predict outcomes. The second phase was a randomised trial to evaluate the impact of an intervention designed to enhance communication.

Participants in the SUPPORT study were recruited from 5 sites. Each participant had 1 of 9 illnesses and was expected to have only a 50% chance of surviving 6 months. These predictions were based on disease classification, severity of illness, age and comorbid conditions. The study involved 4301 patients in the first phase and 4028 patients in the second phase.

The SUPPORT study showed that most adults want realistic estimates of how long they are expected to survive. When physicians avoid discussions of poor prognosis, patients often feel abandoned.[18] The SUPPORT study produced many important findings. For example, for patients admitted to an ICU with acute exacerbation of chronic obstructive pulmonary disease, most of the variation in mortality is explained by age, severity of organ system dysfunction and length of hospitalisation prior to the ICU admission. Controlling for severity of illness, mechanical ventilation in the ICU was not associated with survival.[19] In a related study of mortality after coronary artery bypass surgery, the best predictors of survival following surgery were an acute physiology score and patient demographic characteristics.[20] One study evaluated the value of common laboratory tests versus physician judgment for predicting survival. A simple model including diagnosis, age, days in hospital before the study, presence of cancer, neurological function and 11 physiological measures provides a reasonably good predictive model for survival. In particular, the acute physiology score includes most of the information about which patients will survive and which will die. This simple model is as accurate as a physician's judgment. The model is enhanced slightly by combining the physiological data with the physician's judgment.[21] The models do show that much of the variance in outcome is unexplained, but that treatment predicts little of the variance for patients with multiple organ system failures.

These studies suggest that there may be cases in which extensive treatment has little potential to enhance survival. Physicians often argue that they recognise cases of futility, but proceed with treatment in order to honour the patient's wishes.

5. Correspondence Between Patient and Physician Preferences

Physicians often feel confident that they understand the preferences of their patients. However, a number of studies disclose a disparity between patients' wishes and perceptions of their wishes by physicians, families and other proxies. Our studies have shown that physicians not only were unable to predict their patients' preferences with respect to life-saving treatments such as CPR, ventilator support, tube feedings and hospitalisation for pneumonia, but the physicians' predictions seemed to be influenced by their own personal preferences.[22] A number of other studies show the disparity be-

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tween patient wishes and physician perceptions of these preferences.[23-27]

One study evaluated physician's knowledge of patient preferences for CPR.[17] The patients were 2636 seriously ill adults who completed self interviews (or for whom surrogate interviews were completed on their behalf) about their preferences for CPR. In addition, the physicians responsible for the patients were also interviewed about the patient's preferences for CPR. Nearly one-third of the patients reported that they would forego CPR. The study also demonstrated that the physicians were inaccurate with regard to patient preferences in about one-third of the cases. The lowest-cost cases were those in which the patient did not want CPR and the physician agreed with this preference. The highest-cost cases were those in which the patient did not have a clear preference but the physician believed the patient would want CPR. Overall, the studies revealed poor communication between patients and their physicians. Often, this poor communication leads to excessive resource utilisation and difficult treatment that is not desired by the patient.[17]

The second phase of the SUPPORT study evaluated an intervention designed to enhance patient-physician communication. In comparison with a control group, those who received the intervention were not significantly different on several measures including incidence or timing of 'do not resuscitate' (DNR) orders, physicians' knowledge of preference for DNR status, days spent in the ICU, reported pain and medical care resources used. In other words, the intervention made little difference.[28]

We have observed a similar pattern in several studies. In 1 small study, patients were given an advance directive for medical care. In addition, their physicians were asked to complete the advance directive as surrogates for their patients. Further, the physicians completed an advance directive expressing their own personal preferences. When acting as surrogates for their patients, physicians recorded preferences more similar to their own than to those expressed by their patients.[28] The study was recently replicated using 2 different forms of advance directives. One was a procedure-orientated form and the other asked about quality of life. These results are similar to others that have been reported in the literature.[23-27]

Overall, many studies demonstrate poor correspondence between preferences expressed by patients and the understanding of these preferences by care providers. As a result, an expensive futile treatment may be given even though it is not desired by the patient. In order to reduce miscommunication, explicit advance directives may be necessary.

6. Advance Directives

Advance directives for medical care allow individuals to designate proxy decision makers or to provide specific instructions for what care should be offered in the event that they are no longer able to speak for themselves. A proxy directive allows a surrogate to act on behalf of a patient who is no longer able to speak for him or herself. The disadvantage of proxy directives is that the proxy may misunderstand or decide not to execute a plan that was desired by the patient. Survey data tends to show that most older adults would not want aggressive treatment if it was not likely to be helpful. For example, a Harris poll conducted in 1985 showed that 85% of Americans endorsed the statement 'A patient with a terminal disease ought to be able to tell his doctors to let him die when there is no cure in sight'. Another survey by the Harris organisation[28] revealed that only about one-fifth of the population would want a physician to make terminal healthcare decisions for them.

7. Effect of Patient Self-Determination on Health Status and Costs

The desire for autonomy in the selection of terminal medical treatment has stimulated a variety of different policies. In 1990, the US Congress passed the Patient Self-Determination Act. This legislation required that all hospitals or other institutions that are certified by the US Medicaid and Medicare programmes inform patients about the availability of advance directives. Advance directives define a patient's legal rights to accept or refuse

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medical treatment. Despite this legislative change, relatively few patients have durable power of attorney in their medical records. The presence of an advance directive may lead to reductions in medical care costs by providing more efficient communication of the common patient desire to refuse unnecessary treatment. In order to evaluate this, we have conducted several studies on the effects of advance directives upon health status and cost.[28,29]

In the first study, 204 patients with life-threatening illnesses were enrolled and randomly assigned to an experimental group or a control group. The experimental group was offered the California Durable Power of Attorney, which is a typical proxy-instruction directive. Patients in the control group were not offered an advance directive and received usual care.

Among 104 patients assigned to the advance directive group, 69 (66%) executed it. Among these, 80% chose the least aggressive treatment option. For example, the option on the advance directive favoured by 80% of the patients was 'I do not want my life prolonged and I do not want life sustaining treatment to be provided or continued if the burdens of the treatment outweigh the expected benefits'. Only 2 patients preferred the most aggressive treatment option of 'I want my life to be prolonged to the greatest extent possible without regard to my condition, the chances I have for recovery, or the cost of the procedures'. For patients completing the advance directives, the signed form was placed in their medical record. Further, an orange sticker was placed on the chart indicating the presence of a signed advance directive.

A wide variety of measures were taken in order to evaluate the effect of the advance directive upon health status and healthcare costs. Health outcome was measured by life expectancy and by the Quality of Well-Being (QWB) scale which is a general health status measure. Other measures included cognitive functioning, patient satisfaction, psychological well-being, health locus of control and sense of coherence. Finally, detailed reviews of charts were used to estimate patient charges.

Analysis of the first 100 deaths (among the 204 patients) showed that the interval between entering the study and death is nearly identical for the 2 groups (see fig. 1). In each group, about half the patients died within the first 16 months of the study, and two-thirds of the deaths occurred within the first 30 months. A later report including more deaths suggested the same findings.[29] There were no treatment effects for the personality variables or for the QWB.

Contrary to our hypothesis, medical care charges were nearly identical in the 2 groups. On average, the 100 patients who died each consumed about $US80 000 in medical care resources while they were in the study. However, the 2 groups did not differ from one another in healthcare charges (see fig. 2). Average hospital charges during the last month of life were nearly identical in the 2 groups. In each case, these charges were approximately $US19 000 per patient. In both groups, patients consumed substantial resources during their final phases of life. Among those patients who did die, approximately $US50 000 each was spent in the last 6 months of life, but these charges were the same in both groups.

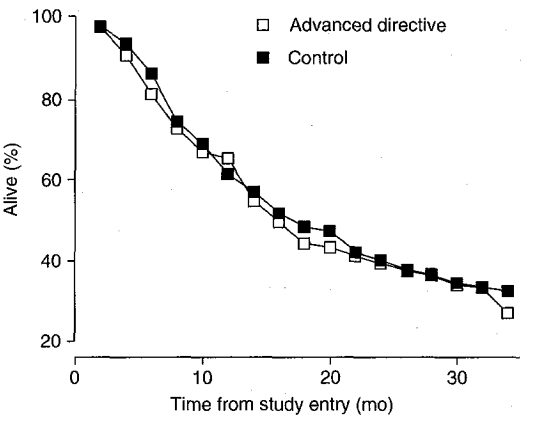

Fig. 1. Effect of advance directives on patient survival by number of months from entry into the study.[28] The analysis included 183 patients (8 patients in the advance directive group and 13 in the control group were lost to follow-up). All 183 patients are accounted for at each follow-up point (from Schneiderman et al.,[28] with permission).

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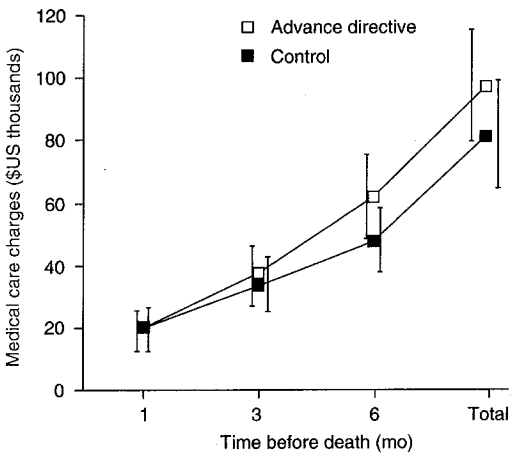

Fig. 2. Effect of advance directives on medical care charges. Charges are cumalative and shown in $US for the advance directive and control groups by length of time before death. Bars represent 95% confidence intervals (from Schneiderman et al.,[28] with permission).

Table I summarises the medical treatments in the advance directive and control groups analysed by subcategories. As the table demonstrates, these charges were quite comparable in all areas.[28]

A variety of explanations for these findings have been considered. One possibility is that the study was simply too small to detect real differences. Although this could be the case, the confidence intervals for the estimates of charges were very large. Post-hoc power analysis suggested that a sample size of 1600 would have been required in order to have a 90% chance of detecting a difference of less than $US2000. With the number of deaths available for analysis and the observed variability, we would only be able to detect a difference of $US30 000. In other words, our best evidence is that the differences between the 2 groups are small and unlikely to be detected under most circumstances.

Another explanation is that the signed advance directive may not provide sufficiently explicit instructions for the attending physician. For example, there are many potential life-saving treatments such as the use of a ventilator, artificial nutrition and hydration, blood transfusion, antibiotic therapy, and so on. Some forms of advance directive are much more explicit about which procedures should be offered or refused.[30] A third explanation is that physicians may have poor insight into the expressed desires of their patients. Some evidence indicates that proxies are more likely to favour life-saving treatments than are patients themselves.[31] Overall, we found relatively little evidence that advance directives affect choices for treatment in terminal care. Further, we found little evidence that advance directives affect cost. We are continuing to investigate these issues in related studies.

8. Physician-Assisted Suicide

8.1 Status

Although there are many occasions in which physicians may not understand their patient's preferences, there are some circumstances in which patients make explicit requests. Clearly the most controversial is the patient's request for medical assistance in ending his/her own life.

Physician-assisted suicide has become an important social and political issue. Legislation to allow assisted suicide has been passed in the US, Europe and Australia. In each case where the issue has been considered, strong arguments on each side have been offered. Those favouring assisted suicide argue that terminally ill patients have the right to die with dignity. Assisted suicide relieves suffering and promotes patient autonomy.[32,33] Those opposing assisted suicide acknowledge the suffering of those with terminal illnesses. However, they contend that allowing any form of assisted suicide opens the door to serious and uncontrollable abuse.[34]

It is presumed that ending life would be desirable when death is perceived as more desirable than continuation of life under its present circumstances. When assisted suicide has been considered for legalisation, it is usually in the context of hopeless prognosis and serious chronic pain. Several studies have attempted to determine the circumstances under which

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Table I. Effects of advance directives on health status and medical treatment charges. Means are expressed ± standard error. The Fisher exact χ^2 test was used for proportions and the t-test for continuous variables (from Schneiderman et al.,[28] with permission)

Variable	Control group (n = 50)	AD group (n = 50)	p-Value	Comparison within the AD group		
				patients who executed and returned document (n = 32)	patients who did not execute and return document (n = 18)	p-Value
Mean hospital days/patient	33.1 ± 3.6	40.8 ± 4.4	0.18	41.1 ± 5.6	40.2 ± 7.2	>0.2
Mean ICU days/patient	3.1 ± 1.0	2.5 ± 1.0	>0.2	3.0 ± 1.3	1.6 ± 1.4	>0.2
Nursing home days/patient	5.8 ± 1.8	2.3 ± 0.7	0.07	2.8 ± 1.0	1.6 ± 0.6	>0.2
Artificial feeding days/patient	0.5 ± 0.4	0.9 ± 0.5	>0.2	0.4 ± 0.4	1.8 ± 1.2	>0.2
Ventilator hours/patient	6.8 ± 5.9	10.5 ± 6.9	>0.2	16.4 ± 10.8	0	>0.2
Patients with DNR orders (%)	80	68	0.2	63	78	>0.2
Patients with CPR events (%)	14	22	>0.2	25	17	>0.2
Antibiotic charges/patient ($US)[a]	3590 ± 614	4485 ± 808	>0.2	3954 ± 992	5429 ± 1399	>0.2
Opioid charges/patient ($US)[a]	826 ± 251	758 ± 125	>0.2	586 ± 91	1063 ± 298	0.14
Patients dying at home (%)	30	30	>0.2	31	28	>0.2
Mean days in study	352 ± 30	343 ± 32	>0.2	371 ± 43	294 ± 47	0.2

a In 1988 US dollars.

Abbreviations: AD = advance directive; CPR = cardiopulmonary resuscitation; DNR = do not resuscitate; ICU = intensive care unit.

health states are perceived as worse than death. In one study, the majority of older nursing home residents who were in chronic pain reported that their state was still more desirable than death. Dementia and coma were the states most likely to be rated as worse than death.[35] These results are similar to those reported in the UK, where permanent coma was the one consistent case where death would be preferred to continued life.[36]

Although not technically legal, assisted suicide has been practiced in The Netherlands for some time. It is legal in the Northern Territory of Australia. Several US states have considered legalising some form of physician-assisted suicide. Referenda on public ballots were defeated in the state of Washington in 1991 and in California in 1992. Oregon passed an assisted suicide referendum in 1994; however, the issue was challenged in the courts and has not yet been implemented. Most recently, however, the US Court of Appeals for the Ninth Circuit issued a landmark decision declaring that a Washington state statute banning assisted suicide as applied to mentally competent, terminally ill adults was unconstitutional.[37] This was followed by a similar decision by the US Court of Appeals for the Second Circuit. The US Supreme Court has agreed to rule on these cases in this term. Jack Kevorkian, MD, has never been found guilty of any crime for his role in assisted suicide.

8.2 Specific Approaches

Australia's Northern Territory passed the Northern Territory Rights of the Terminally Ill Act in May 1995. The legislation permits patients who are in the very last phases of life to formally request assistance in ending their lives. The Northern Territory is 1 of 7 Australian states, and is a geographically large area that houses a relatively small population of 170 000, nearly half of whom live in the state capital of Darwin. The Act indemnifies physicians against legal action as long as they comply with a set of guidelines. The physician must be registered in the state and have at least 5 years of postgraduate experience. The patient must be at least 18 years old, and be of sound mind. Furthermore, the patient must be suffering from a terminal illness and be experiencing pain or distress that is severe and unacceptable. The physician must be satisfied that medical or surgical treatment would be of no benefit beyond the relief of pain.

Before any assisted suicide, the opinion of a second physician with psychiatric training is required. This opinion is used to confirm the diagnosis and to rule

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out treatable clinical depression. The patient must wait 7 days before signing the formal certificate and an additional 48 hours must elapse between the signing of the request and the implementation of the procedure.[38]

Assisted suicide is technically not legal in The Netherlands. However, physicians are not prosecuted for assisting with suicide if certain conditions are met. In particular, the patient's request must be voluntary and well informed. There must be documentation that the patient desires to end his/her life and is experiencing unacceptable suffering. Further, the attending physician must consult with at least one other colleague.[39]

Several studies have evaluated attitudes toward assisted suicide. In 1 study, conducted in Michigan, questionnaires were mailed to 3 stratified random samples of physicians. The physicians were selected from specialties likely to care for terminally ill patients. Questionnaires were mailed to 1518 physicians in 1994 and 1995. 74% of the physicians returned the questionnaire. In addition, similar questionnaires were mailed to approximately 1300 adults from the general population, and 76% returned completed forms. Physicians and the general public were quite similar in their attitudes toward legalised euthanasia. 56% of the physicians and 66% of the general public supported legalisation. Approximately 37% of the physicians and 26% of the adult general public sample preferred a ban. About 8% in each group were uncertain. Respondents were also given the opportunity to respond to a different question which asked whether or not they preferred legalisation or 'no law', in which the government remained uninvolved. Physicians were about equally divided between these 2 options (40 *vs* 37%).[40]

A related study in the US state of Oregon surveyed physicians who might be eligible to prescribe lethal doses of medication. As noted in section 8.1, Oregon has already passed the Oregon Death With Dignity Act. The Act has not been implemented because of legal challenges. Questionnaires were sent to 3944 eligible physicians, of whom about 70% responded. 60% of the physicians supported legalisation of physician-assisted suicide, and 46% reported they would be willing to prescribe a lethal dose of medication if it were legal. On the other hand, 31% of the respondents noted that they had moral opposition to euthanasia policies and would not cooperate with patient requests.

One of the concerns identified in the Oregon study was that most physicians felt that patients would choose physician-assisted suicide because of concern about being a burden to others (93%) or because of financial pressure (83%). Nearly 29% of the physicians reported that the legalisation of physician-assisted suicide could result in patients being given overdoses without their consent.[41]

Physician-assisted suicide will remain an important social and political issue. Although few jurisdictions have implemented assisted suicide policies, there is increasing public pressure to consider legislation allowing physicians to prescribe medications that will hasten the death of terminally ill patients. With the move toward managed care, incentives for expensive heroic end-of-life treatment have declined. One concern is that the new era of managed medicine may create pressure toward assisted suicide as an alternative to end-of-life care, although it is important to point out that patients already take into account the costs of their care and their burdens on others when considering life-prolonging treatments.[42] We searched the literature for studies on the effects of managed care on physician-assisted suicide, but were unable to locate any empirical studies. More research on doctor/patient communication is necessary in order to explore these issues in greater detail.

9. Conclusion

Healthcare is not consumed evenly across the lifespan. The most intensive use of services tends to be at the very end of life. Heroic efforts for those with terminal illnesses are sometimes futile. Criteria for establishing the futility of end-of-life treatment are needed. For example, a treatment might be regarded as futile if it has not achieved certain quantitative and qualitative thresholds. One proposal is

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that a treatment is qualitatively futile if it fails to restore consciousness and gain the patient's independence from the ICU or the hospital. A treatment is quantitatively futile if it fails to achieve such an outcome under specified clinical circumstances at least once in 100 attempts.

Recognising futility, some physicians proceed under the assumption that they are enacting the wishes of their patients. However, studies suggest that communication between patients and physicians is often poor. In some cases, physicians assume incorrectly that their own preferences represent those of their patients. Other studies document that excessive end-of-life costs might be avoided by better communication between doctors and patients.

Euthanasia is now being practiced in Europe, the US and Australia. The implementation of these policies raises serious ethical and moral concerns. Although some evidence suggests that the majority of physicians and the general public tend to support some form of euthanasia, concerns have been raised about the role of financial incentives for mercy killing. For example, patients may consider the financial implications and their burden to others in making decisions to end their own lives. Considerably more discussion is required to clarify these issues.

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